

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
18 November 2004 (18.11.2004)

PCT

(10) International Publication Number  
**WO 2004/098385 A3**

(51) International Patent Classification<sup>7</sup>: **A61B 18/18**

(21) International Application Number:

PCT/US2004/013443

(22) International Filing Date: 30 April 2004 (30.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/466,954 1 May 2003 (01.05.2003) US

(71) Applicant (for all designated States except US): **SHERWOOD SERVICES AG [CH/CH]**; Bahnofstrasse 29, CH-8200 Schaffhausen (CH).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WHAM, Robert H.** [US/US]; 705 Yale Road, Boulder, CO 80305 (US). **STURM, Thomas** [US/US]; 795 Pope Drive, Erie, CO 80516 (US). **FAULKNER, William, David** [US/US]; 4436 Clipper Court, Boulder, CO 80301 (US).

(74) Agents: **FARBER, Mark**, et al.; US Surgical, Tyco Health Care Group, LP, 150 Glover Avenue, Norwalk, CT 06856 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

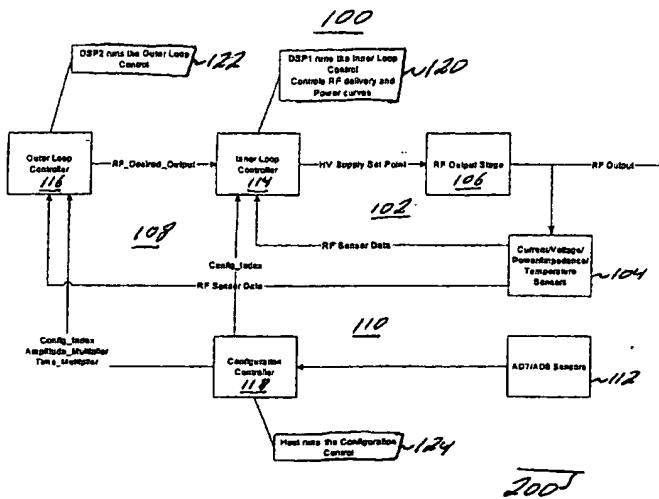
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR PROGRAMMING AND CONTROLLING AN ELECTROSURGICAL GENERATOR SYSTEM



WO 2004/098385 A3

(57) Abstract: A method and system are disclosed enabling configuration of a control system for an electrosurgical generator system for creating new surgical applications without changing the underlying software system. The system includes an outer loop controller for generating a control signal in accordance with at least a first subset of sensor data from at least one sensor; an inner loop controller for generating a setpoint control signal which is provided to an RF stage in accordance with at least the control signal generated by the outer loop controller and a second subset of sensor data from the at least one sensor; and a configuration controller for generating configuration data and providing first and second configuration data sets of the configuration data to the inner loop and outer loop controllers, respectively, for configuration thereof to provide a type of control selectable from a variety of types of control.



(88) Date of publication of the international search report:  
24 February 2005

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/13443

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61 B 18/18  
US CL : 606/034

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 606/034, 27-31, 41-42, 45-50; 607/100-102, 122; 600/373-374, 549

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| Y          | US 6,511,478 B1 (Burnside et al.) 28 January 2003 (28.01.2003), See entire document | 1-39                  |

Further documents are listed in the continuation of Box C.

See patent family annex.

|   |     |  |
|---|-----|--|
| * Special categories of cited documents:  | "T" | later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  |
| "A" document defining the general state of the art which is not considered to be of particular relevance  | "X" | document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone   |
| "E" earlier application or patent published on or after the international filing date   | "Y" | document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "&" | document member of the same patent family  |
| "O" document referring to an oral disclosure, use, exhibition or other means  |     |  |
| "P" document published prior to the international filing date but later than the priority date claimed  |     |  |

Date of the actual completion of the international search

07 November 2004 (07.11.2004)

Date of mailing of the international search report

10 DEC 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
Facsimile No. (703) 305-3230

Authorized officer

Rosiland S Rollins

Telephone No. 703/3080858